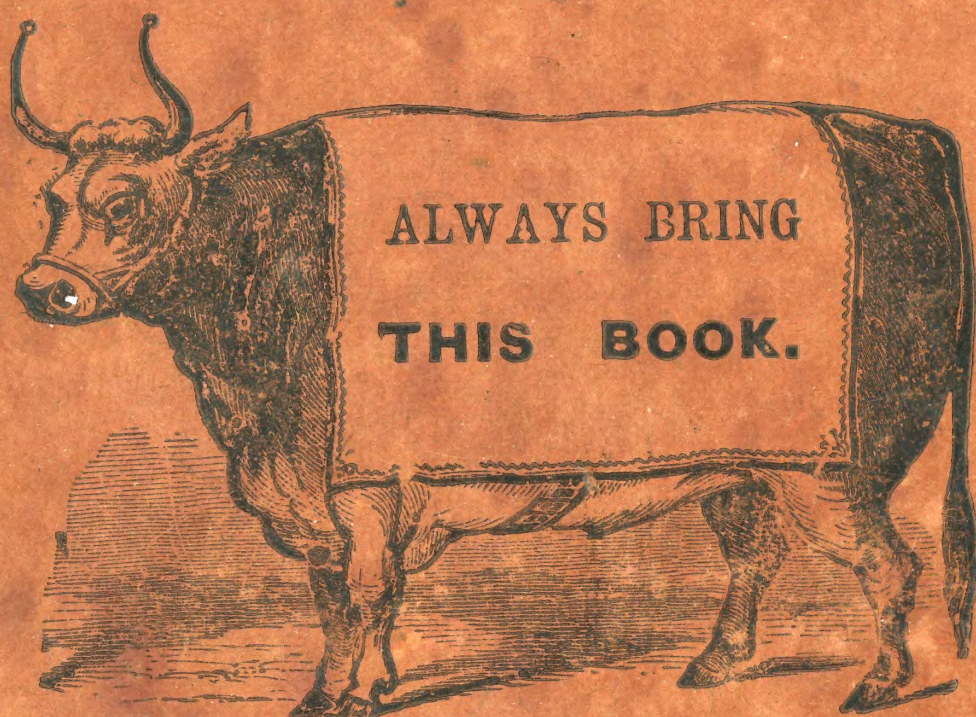


436-450

ALL BILLS SETTLED MONTHLY.



M.....

IN ACCOUNT WITH

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PROVISIONS,

CONSTANTLY ON HAND

Beef, Pork, Mutton, Lamb, Poultry,
TRIPE, SAUSAGES, HAM,
LARD, PIGS' FEET, LIVER, &c.

Also, Fresh Fruit and Vegetables

Of all kinds in their season, at lowest cash prices.

Goods delivered promptly, free of expense.

436

minors, 2-disk on white thick, flat-
topped juv 6. Bluish color. Both
a case bearer and leaf miner.
(See alcoholic specimen)
Color pale brownish, hd. & st. black
also anal plate. Cases hatched
on back of leaf and larva
minors between 2 epidermes
returning into case.

437

Little larva spun up among the
young leaves of willow. Thought
it a mine. But tubercles like
noctuid so kept it to see
tubercles minute blackish, normal
red green with d, lat. and
s-s white line.

moth. Stopped spinning and was
marked like a noctuid with
enlarged ¹², Hd partly below
shiny pale greenish. Red whitish
green white dotted. Broad d white
line narrow broken lat., then a
blackish shade. Super s. line white
below spiracle ²⁸ on 12 and onto anal
fold. Setae distinct brown, from center
of largest white dots. Hd $1.8 \pm$

Entered ground June 18

note read from paper May 1 1895
Cat No. 11490

Taeniocampa

438

15 good? eggs of *Colaradia pandora* from
C. H. Wiley, Miles City, Montana.
Egg shaped, flattened in two sides
or a little concave, smooth shining
of a pearly greenish white with a
round brown spot of small size in
the center of the larger end.

Size $2.4 \times 2.0 \times 1.2$ mm (read June 12)

Hatched June 19, 1894 Hd higher than wide
rounded, full, shiny red brown
shading into blackish below
setae fine, not numerous; w. 1.0 mm
Body and spines black; an area
surrounding bases of i on 5-11

salmon brown. A sd, lat and
s-s white line broken into dots.
A white line bordering anal plate
abd feet 7-10 salmon brown ex-
cept their leg plate which are
black. An ad-dorsal white dot
on 4. Spine and setae black

Taberles on 5-11 then. ① a large shaft with conical base slightly tapering to truncate apex with 2 slight excrescences about the middle one below the other, but bearing nothing at apex a crown on 3 short thin like spin and the long spin seta arranged as pent of the crown ② just, and a little below i, no shaft, simply a spinose seta from the skin; ③ like i but with a less distinct central excrescence, simply irregularly of smooth surface, the crown at summit being two point and the spinose seta. Sep biamulate the first, are small, i and iii on int. annulets, ii on post one. Spinal rather small but very distinct (1/2 inch) ④ ⑤ a short shaft, bearing a spinose seta before tip, and at tip two points and another spinose seta (⑥ absent) ⑦ a short clean seta

no spinose on base of leg plate and ⑧ another found inside. On 5-6 same, ④+⑤, ⑥ absent; below a short process bearing vii a ^(religum small and before the seta) as at tip; further in is vii c from a tubercle on skin and viii near ventral line, likewise normal seta. On 12 a Y shaped process ① each with tubercle with crown of 2-4 points and seta, ii seta only; iii, iv+v (⑥ absent, the short shaft of vii a also absent) vii b and viii single setae. On 13 vii b and viii same, i as on 5-11, ② a long Y shaped shaft like i+on 12 ③ long shaft with crown and 1 seta the single shaft of i sets a little and to the + truncate ii. Anal plate with 4 marginal & one central seta to each half; leg plate with about 5 setae, no others seen on 13. On 3-4 ① truncate tip each with crown of 2-3 points and seta, ② same shorter, the

spiracle marks; short process with 1
seta below ant. to mark. Above base
of leg short process 1 seta before apex,
1 at apex. Several simple setae on leg
Ch 2, a long process with short
prickles & 2 setae on cth. 2 setae
with no process on post. edge, a
prickle process with 2 setae & 1
on edge cth; short stig. process
2 setae, one before tip; another same
before base of leg.

(Riddled a little willow but died)

439

On young leaves of willow, spun up with
a loose web. one or several together
Sanotripsa luteiviridis (?) Platystrophia
June 12, 1894. Setae white, distinct
long, single, normal for macro.
white. Body smooth, not shiny
subtranslucent green, yellowish
tinged especially on intersegmental
folds. Dorsal vessel distinct
dark. Hd not shiny pale
greenish with testaceous tinge
and a few long hairs. Hd 1.8 ±
Cov June 16 - like Sanotripsa &
white sick

Others on willows Keene Valley N.Y.

June 21, 1894. On Populus balsamifera
just like Ysaema mes. June 25
Imago June 26 1894

Sanotripsa

439A

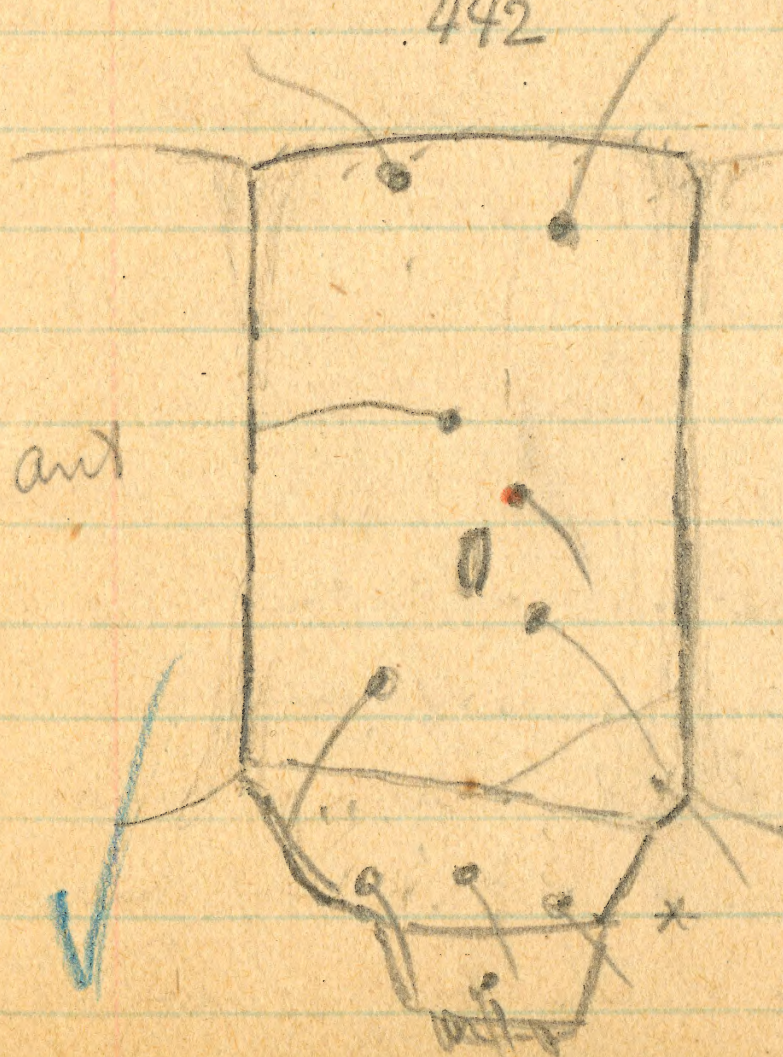
June 16 on willow & poplar Fribble & MacLach-
land Park N.Y. Same but a quite
distinct white stig. line & geminate whitish
dorsal shade

440

Amisota eggs on Oak S.H.H., found up
towards Anacapa Chasm. Elliptical
flattened on thin sides $1.7 \times 1.5 \times$
color dark red brown, when found.
Laid 15 together but well separated,
not touching on back of leaf.
Hatched June 17. Hd considerably higher
than wide, rounded. Antennae
shining black. Labrum pale. w. .7 mm
Body all black, a long single process
on 3rd bearing two long setae
Anal plate large, feet strong. Tuberc-
les represented by very short spines
which consist of a conical shiny
base bearing short setae, ① ant
normal, single d on 12, ② post, ③ lat.
[^{on 12} i ant, ii post, 2d anted, iii lat; same
on 12, ii being small and post.
i not consolidated, i+ on 13 ant, ii
gone, iii present, iv & v two bristles
from single area S-S, vi absent,

vii on leg plate angle, viii inside leg.]
(Had no oak and they died)

442



(x These vary
from 2 to
4 on different
days of the
same larva)

*Falcaria
bilineata*

441 = 404

Platyphragma arcuata (Tip of large larva)

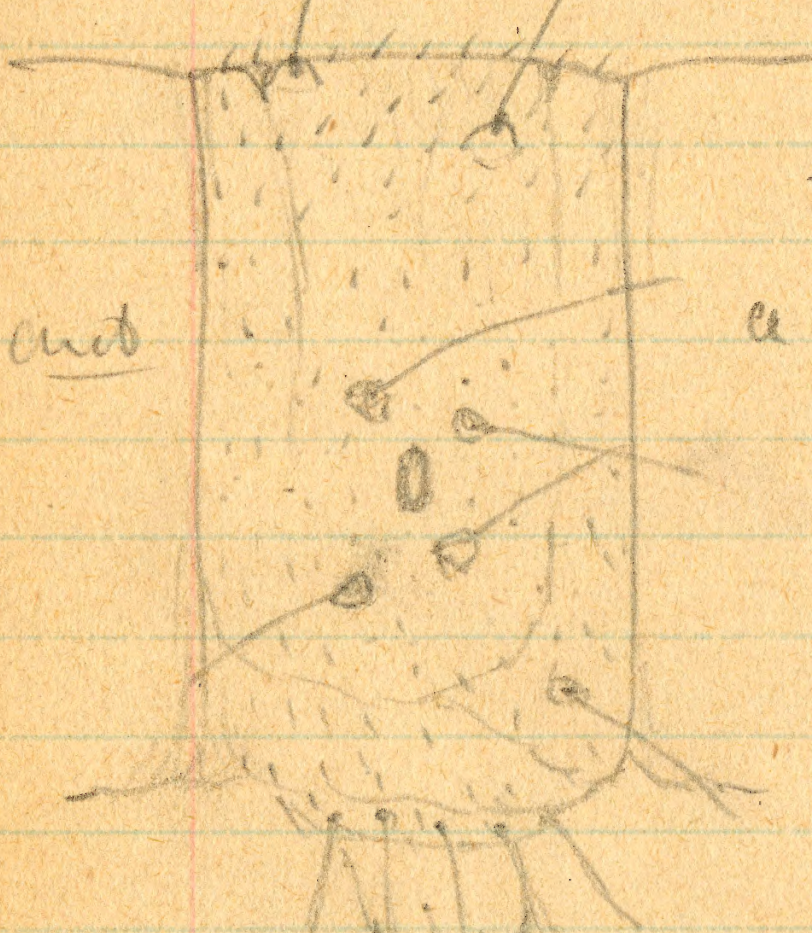


Fig. 1

a central segment

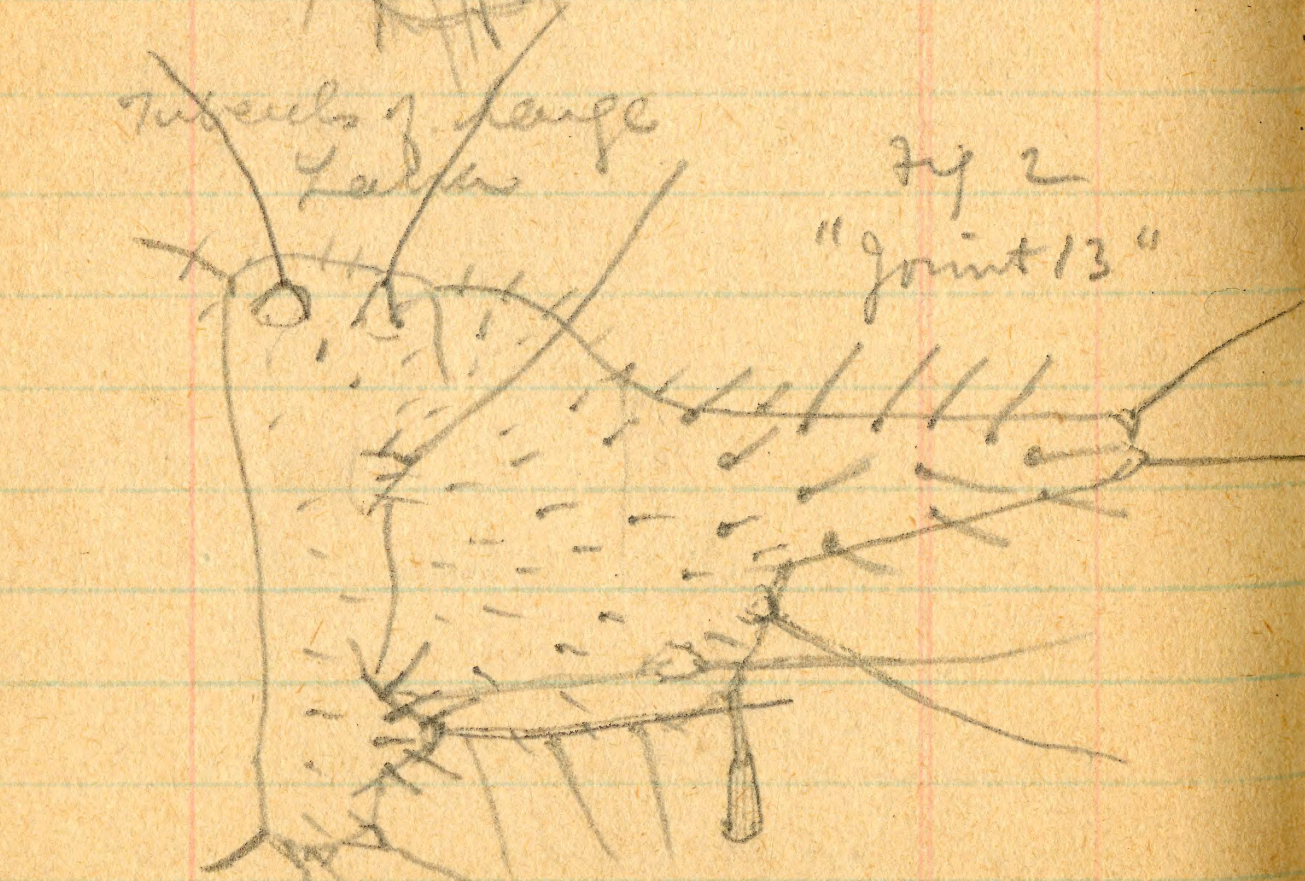


Fig. 2

"joint 13"

*vi also absent on 5 and 6 but vii present, 4 3 setae (1/2 in obj)

Calc. .3 .43 .62 1.26 1.8 max. 70
under microscope pale yellow, largely
overlaid with salmon red, in
irregular angular blotches

P. arcuata on white birch and Alder,
Keene Valley N.Y. June 17, 1894.

Egg. elliptical, flattened above &
below - a little concave, smooth,
shell colorless salmon pink .8 x .6 x .4
Laid singly or in two on upper side
of leaf. Under 1/2 inch obj. the ampulla
is faintly marked into rounded hex-
agonal cells, with very minute short
stages! No round shiny brown black with
white hairs. w. .25 mm Body cylindrical
seg. incisions well marked. Setae
pale rather long with enlarged
tips, arising from small tubercle
normal i ii iii iv v (vi absent 1/2 in obj) and
first stage, other normal *
v stage below, s-v region
to base of leg seems clear) anal feet
absent, a pair of short upturned
anal prongs on edge of plate
color purplish brown, 5 and 11
pale yellow, except a dark

white of the wings

sd line on 11. Some s-d yellowish
mottling, especially on 8-10, defining
obscurely a s-d line. S-v region
and abd feet pale luteous.

Larva eats upper epidermis &
parenchyma under a tent of a
coarse silk webbing, slightly
drawing the leaf together.

Stage 5 Same tent but a little larger
and less a little more drawn up

hd same, a little notched behind
at vertex. ^{showing faintly pale transverse bands} W. 4 mm \pm Segs distinctly
faintly annulate, anal plate with
an upturned bifid short anal
process. Setae fine white, the chief
ones with conical bases. A number
of secondary ones especially s-v,
mostly shorter. Body velvety brown
black, dotted with yellow, s and
11 largely yellow, the tint prevailing
d. 7-9 with an obscure brown
faint double d line there. The feet

black, anal absent. 26 yellow in
front & this color on 11 is divided by
a sd line as before

Stage hd. 6. Hd whitish brown with 3
transverse brown bands, bilobed
rather flattened before with many
pale setae. Body marked much as
before, but the s-d brown line more
distinct showing faintly in the pale
yellow of joint 5. Setae distinct, pale
with enlarged conical bases, anal
prominence short, upcurved

Stage hd 1 mm \pm Hd yellowish white
with 3 trans. black lines, scarcely bilobed
the lower over clypeus from ocelli; other 2
as in anal. (40x) marking intermediate
between former stage and next. Ground
color yellowish pale greenish, most
predominant on 5 all. a purple brown
s-d band, below which centrally &
in dorsal space are same color at
terminally checkered striae. Tub. 11 ^{point}

Setae pale distinct
dark
whitish
on 3 or 4

late .3 .43 .62 1.26 1.8 wt .70

Food .3 .6 1.05 1.5

Cale. .31 .58 1.05 (1.48) 1.0

Oct 13

442

not arcuate nor area on white body
Valley June 8 1898, in the
the stem, anal end of the
H. rather square, bilobed the
lobes rounded, feet before, chippers small
(shd from 2+)
W. 1.8 ±, pale whitish, thickly mottled
with pale reddish brown, the mottling
out into several areas by narrow
lines of the ground color; ocelli black
feet normal, anal absent, a short
upturned rounded anal process
Tubercles distinct, button like with
short pale setae, ii enlarged on
all segs but 5; on 3 & 4 the i-ii pair
form a partly consolidated process
forming a short horn like structure
a supplementary iii below iii and part
behind spiracles; others 5-8. Body
marked in an undefined manner
varied with minor brown and
yellowish white, and traces of

several appearance varies
in different lines from creamy
yellowish with slight marks
to dark rusty brown.
brown dark brown d. & sd line
side of 5 and abd feet yellowish
white, venter tinged with brown
Tubercles 1, 5-12 white, enlarged ii
various as also the enlarged
pair on 3 & 4. The markings just
suggest oblique lateral lines
from above forward-down
are no defined lines. Dark marks
predominate on 6-7 dorsally
The feet pale [shd 1.4?] also III
Stage IV hd 1.25 as before, the brown mottling
are more confluent into blotches.
No bilobed the apices rounded pointed
distinct. Body roughened from the
granular bases of tubercles; setae
short, fine; ii enlarged on 6, 7 & 12 and
especially the sd pair on 3 & 4, then
bases brown, all tubercles white.
Femur color rusty brown shaded
with white on 5, on 11 laterally
and a lateral white shade d

An erasible blackish gland on 2
just above base of the foot

on 8-9. Traces of d. line and
black shaded 8d marks especially
on 6-8, 10. Marks ill defined
and difficult to describe. Larva
rests on leaf near end on
upper side. Head & tail moder-
ately elevated. Eats whole leaf.
Stage II hd. 6 4d pale horn dotted
with darker with a transverse
pale line above middle, bilobed
tubercles pale with enlarged bases,
especially 8d pair on 3-4. setae
short, 13 with lateral ridge
and short upturned process on
anal plate. No anal feet. Body
varied with brown and white
& yellowish, the pale color predom-
inant on 2, 5, 8-9 and 11. Larva
rests on upper side of leaf near tip
on a surface from which it has
eaten the upper epidermis & parenchyma
a few threads spin along the teeth

Sample { .3 (last) .6 (th hd), new hd 1.05-
hd 1.05 new hd 1.5-
C. univolt (hd 1.6) new hd 2.2 Same
of leaf, but no sign of a house.
(molt. hd hd .6, new head 1.1 ±)
Stage III hd .3 4d round, notched from
behind at vertex, dark blackish
brown. setae very short, pale with
glandular tips; a short thick
process on end of anal plate
bearing 2 setae i-ii near a line
iii above & below, iv below & behind
v and below; no more seen, a small
black leg plate. Body somewhat
lumpy, segs. plainly 3-annulate
lumping rather irregular. Color
brown, blotched with white, forming
distinct patches on 5, 8, 9 and 11
have lateral dots the whole length
and on the slight dorsal elevation
of 12 and on edge of anal plate.
rests on its pink surface near tip
4 in a string on the back of a
leaf near base of a leaf. Elliptical
lined above and below and marked

Some
between
leaves
a cone
healthy
4 yellow
Red

under in an
into irregular
by slight
and the

Wrote June 22
to describe a
white with
wide lines

443

Noctuid, Keene Valley, N.Y. June 12 1894
Hd partly below, green with about
25 white spots on each side. each of
which consists of from 3 to 7 conj. *lines*

444

[Not gave a crop of
John's names liked
these from J. lignicolor
at North Wall, 22 of them
subventral wings]

~~Caterpillar~~? eggs on white Birch, Keams Valley
N.Y. June 19 1894. Extremely flat,
thin, water like, turning at the edges
slightly elliptical. 8×6 mm and
very thin, pale whitish yellowish
mass. Under $\frac{1}{2}$ in. thick, covered
with rather coarse irregular
but distinct quadrangular to
hexagonal reticulations. Laid
in a mass closely imbricated
like scales on a fish on upper
side of leaf. Mass 9×4 mm, $5\frac{1}{2} \times 4\frac{1}{2}$
marginal area of egg very thin and
seems to contain no yolk which
is condensed in central thicker portion.
Eggs brown marked with a reddish
line and finally a black band
and white curved body replace the
Hatched June 24 i, ii, iii normal setae
simple, quite long, iv & v consolidated
one of them short, vi absent. the

next in base of leg from a distinct
tubercle but in line with VII
in legless segs. (2 setae seen); viii on
legless segs. single and inside of
feet. [Can not positively make out
how to see more than 1 seta from iv+v; but it is
surely not present independently.]
Head bilobed apices below 2 with long
choppers, blackish, mouth pale
brown, eyes black. Red all
translucent light yellowish
setae distinct pale with very
slight tubercle.

Egg of C. quadrinervis laid by
 pupa of Phaenobrya June 1894
 Elliptical, flattened on two sides
 smooth, light green not shiny
 1.8 x 1.6 x 1.4 mm Under 2 in faintly
 reticulated by rather close obscure
 round depressions, the whole faintly
 granular like ground glass.

Hatched June 20 Seps. distinctly 8-annu-
 late no cilia no anal plate. Setae
 simple, no secondary ones, short
 straight, glandular with very
 slightly enlarged round tips. i and
 ii in line on annulets 3 and 6, iii
 super seta on ann. 4, one and 1/2
 spiracle on ann 2; 1 just below spiracle
 two in line on folds above base of
 leg, 1 on leg. and one inside ant
 same on higher seps. vii seem to
 be rather widely separated by
 B-V foldings. (See over)



Horn very long and slender, 2 setae at tip and 2 more below tip on each side. beside which it is thickly covered with

little glandular setae about $\frac{1}{2}$ as long, hundreds of them; ii is present behind the horn, but others not made out except S-V.

On 3:4 a 2-d pair of setae on same annulet, and from a common slightly enlarged base; a lateral pair same, on same annulet, a single one below, another S-V and several on the leg. Color of larva throughout uniform pale whitish tinged with yellow, not shiny. Length $5\frac{1}{2}$ mm; of horn 1.6 mm. w. hd 1.0 mm. As stage advances, pale d, S-d and 7 oblique lateral lines appear, on joint to S-V

Horn on an ad-dorsal line on thorax only II to S-d and d.

Slight 2-d smooth prominence on the annulet anterior to i pair and entirely independent of it. Horn faint reddish. The pale lines are composed of rounded white spots on the annulet d, oblique line d, white + base of S-d.

Molt June 24 2d round, pale green and with little concealed white points. As in inst., horn late, all thickly covered with concealed white points being each a minute seta. Trace d & lat layer in line such as to form d & 7 oblique lateral rows of tooth like lines. Processes on 3 and 4 many pointed, elevated with short horn, the paired i tubercle still made out joint to each, but the other tub. no longer distinguishable from the mass of secondary ones. Horn long, straight, sharply spinose on 3, 4 ①, ② lat, ③ small next to ④ of the in line, not well distinguished. ⑤ small S-V

Another on willow July 4 same
 Hd 1. ± Another on birch same
 On apple & willow Jefferson Highlands
 N.H. July 12 1895 Stages I & II
 384 446 *Bem. fed on 8 & 9 scanty
 adults and 99.*

Little Acronycta? stage I & II on willow
 birch Keene Valley June 19 1894
 Setae large distinct, their bases so
 long as to be nearly touching like
 young Acetian, normal, vi absent,
 and more seen on leg, 1888. top part. On
 4, 5, 8, 9, 12 a brown d patch; all the
 rest translucent whitish; eye
 black, mouth brown, feet showing
 green by transparency. Setae dark
 w. bd. 28 mm ±. Pores upper surface
 C-sh and anal plate dusky, luteous
July 22 host i with 3 or 4 hairs, the
 original seta longest, ii with only one
 distinct hair, the others with about 3,
 it as large as any. vi now present
 S-V above leg with 3 hairs. 5 or 6 anal
 short hair on leg plate. Hd. beveled,
 angular with 4 or 5 setae, whitish
 a brown shade at vertex; eye black
 mouth brown. Body whitish, 2

Calc. 33 .47 *mature portion*
 .96 *rest* → *on side of leg*
 2.0 28 2
 12
 body brown d. On 4-5, 8-9 and 12
 3 dark red brown patches. On 4
 including i, on the rest i and ii,
 on 12 i and ii are nearly in line,
 the patch is light brown and ex-
 tends back.

Another on willow
 Chattaugus. Same
 but brown space on
 9 lightened a little
 as if just touched to
 run forward
 also on yellow Keene
 probably Aug 7 & 9

1 post. ii on
 to it
 then joint
 and apparently
 the setae on
 and one,
 now with bands

between i & ii, partly broken by the
 brown patches
July 26 host ii square, lobed, pale
 greenish a brown oval ring marks on
 each side which is produced inward
 and ends its fellow at vertex. Mouth
 tinged as before, w. 6 ± Body as before
 host ii has 3 or 4 hairs but is still
 undeveloped i; it is long and

446 allied to A. triton
(10) but the enlarged
of d. band on 8-11 arches
green only on 10-11 instead
of on all segments and
there is no distinct
reddish edging to d.
stripe.

Another on willow
Plattolamp. I am
not home space no
9 lightened a little
as if pen touched to
run forward
also in with Keene
fully Aug 29

Another on willow July 4 same
 Vol 1. + Another on birch same
 On apple & willow yellow Highland
 H.N. July 12 1955 Stages I & II
 364 446 *Bem. p. 108 8 & 9 scanty
 and 19.*

Little Acronycta? stage I & II on white
 birch. Kennebec Valley June 19 1955
 Setae large distinct, then bases so
 long as to be nearly touching like
 young Arctian, normal, vi absent,
 and more seen on leg. i & ii post. On
 4, 5, 8, 9, 12 a brown d patch; all the
 rest translucent whitish; eye
 black, mouth brown, foot showing
 green by transparency. Setae dark
 w. bd. 25 mm ±. Pubes upper surface
 C-sh and anal plate dusky, luteous
July 22 host i with 3 or 4 hairs, the
 original seta on post, ii with only one
 distinct hair, the others with about 2,
 iv as large as any. vi now present
 S-V above leg with 3 hairs. Several
 short hairs on leg plate. Hd bilobed,
 irregular with pale setae. whitish
 a brown shade at vertex; eye black
 mouth brown. Body whitish, 2

Call. 33 .47 ^{mature position} 67 .96
 on side of leg 2.0 2.8 2
 long brown d. On 4-9, 11 & 12
 3 dark red brown patches. On 4
 enclosing i, on the rest i and ii;
 on 12 i and ii are nearly in line,
 the patch is lighter brown and ex-
 tends a little way on 11 post. ii on
 12 is several hairs, while it is
 usually 1-haired on the other joint.
 i is present on 13 and appears
 also on 13 post, ii forming 2 of the setae on
 edge of anal plate, i the ant. one.
 Tubercles conical, concolorous with body
 Late a white d band appears
 between i & ii, partially broken by the
 brown patches
July 26 Hd square, bilobed, pale
 greenish a brown oval ring marks on
 each side which is produced inward
 and pinches below at vertex. Mouth
 tinged as before. w. 6 ± Body as before
 but ii has 3 or 4 hairs and is still
 undeveloped. i; it is large and

Born other June 28 same best colored
 except for white (sd line) and green
 inside. on dark patches in marks
 same as 1st but i.e. all green yellowish sd line
 spotted in the white line
 near center of 1st iii and v.

IV June 29 Hd whitish, clippers green
 a ring shaped brown stripe mark on
 each side with a concentric dash
 above. Red pale green, sd brown, yellowish,
 d. patches as before. Ears whole but
 hair rather long, pretty blackish
 May 31 3 brown, mostly over apex and
 front of tube except around green clippers
 where white spots; tubercle at apex
 rather dark above, pale below. Body as
 before, dark tubercle granular, few
 haired, not well concol dated W, 1.5 ±
 later yellow band - except covering
 the patches, i on 6 ±, has a touch of the color
 and the patch on 1-12 is fainter before.
 1st of rest now around in which
 is hunched up, the head held down

May 31 July 8 Hd 2.2 same, no 2d hairs
 May 31 July 14 Hd whitish brown except green
 clippers and a little black to it. 1st of 1st pale
 slight pale mottling: actual black is 2.8 mm
 not small, 12 enlarged in an area in which
 is square joined of it. Body soft yellowish
 green, a whitish line band fainter on 2
 standing. Tubercles i on 5-7, broken in places
 including into an elliptical patch 8-11 evenly
 a green area 10-11 narrow 12-13. Warts small
 with very few (2 or 3) fine rather short black
 hairs. Spiracles white with narrow black
 band & brown shading. Warts rather paler
 than body. Claspers 2 filed brownish
 1st & 2nd July 20 another head 15

can several of small grey leaves
 spun together in a vase or cup the top
 quite open. I acquire a black patch
 on side of 3 and 4 and holes rotten
 to one looking in 447 the cup soon
 = 738

Little slender macro, on willow
 Keen Valley N.Y. June 20 1894. Long
 slender, oval head gently divergent
 feet and setae normal. 1st
 yellowish green, rather lanuginous
 with dusky slender greenish
 d. and sd lines.

Next June 23 same

Next June 27 same by first tremulant
 yellowish green, "mossy" in color
 1st line represented by broad
 d. vessel; sd line broadly edged
 with pale above. Hd same green, 2 ±
 white black. i, ii near in line, iii
 super setae, and a little one ahead
 behind it, just below sd line but
 like the other, is 58 post, v and vi
 post vi almost in line; 3 on leg plates

July 16 1894 Ant. 1108 5. litating
 made volume from at
 another July 18 all same green, a
 one in middle anterior of hd. W. 3 ±

divided 230 mm
 edges below by black
 line
 of a yellow

Calc. .45 .76 1.26 2.1 3.5 ratio .60
 { Found 1216 1.3 2.1
 " 80448 .8 1.4 3.2
 .5 448 = 16

Copied for
 Packard
 7-3-94

Wings bifurcate on elum in fresh
 undeb from which leaf again
 away! Ht higher than 2
 bilobed shiny luteous from
 brown lateral stripes to vent.
 celli black. w. 84 mm ± body
 cylindrical shiny green, a little
 dorsal red-brown dot on 5, a con-
 siderable bilobed process on 6
 red brown, the ant. dots largest
 a single low broad one on 12
 bearing ① towards apex feet all
 red brown with 5-8 spots more
 reddish 2-5 and 11, abd. all red
 shiny on 12 yellowish on the sides
 setae all fine short dark not
 perceptibly glandular. C-sh on
 anal plate small, obscure dusky
 Setae i, ii, iii; iv seg post. below; v and 5-v,
 vi above base of leg, vii 4 setae on purple leg
 on 6, i on base of process, ii not on it

Wings June 23 numbered 1.4 ± See 181516 for
 head. S. process visible on 5, 6, 7 and

448
 Egg on elum in hatches of 2, 3 and 4 on under side
 of leaf. Yellowish high sides July 18 1895-
 Rather fuller than hemispherical with flat
 base. Not shiny whitish yellow. Diam.
 mm, height .7 mm. Retentionation small.
 linear, rather elongate, irregularly hexagonal
 much smaller than anal. Ovipositor when later
 is an almost smooth area surrounding a
 very slight prominence or all smooth.
 Hatched July 24 and seen to top of teeth in end
 of crickets. Setae just very of the end. H. feet
 and C-sh blackish. ad. spot on 6 and 12 and some
 on 4, 6 and 10 brownish red. Anal feet pale, 9 and 10
 with enlarged d. Setae distinct, dark.



tripe, feet & tubercles black
 at end of stage a slight
 d. prominence on 6 and 12
 marked with red; a red
 star at base of each foot
 and correspondingly on 5, 6 and 11. C-sh on

Eggs on elm in hatches of 2, 3 and 4 on under side
of leaf, Jefferson High lands July 18 1895.

Rather more than hemispherical with flat
base. Not shining whitish yellow. Diam 1
mm, height .7 mm. Retention small,
linear, rather elongate, irregular hexagonal
much smaller toward micropyle when there
is an almost smooth area surrounding a
very slight prominence or all smooth.

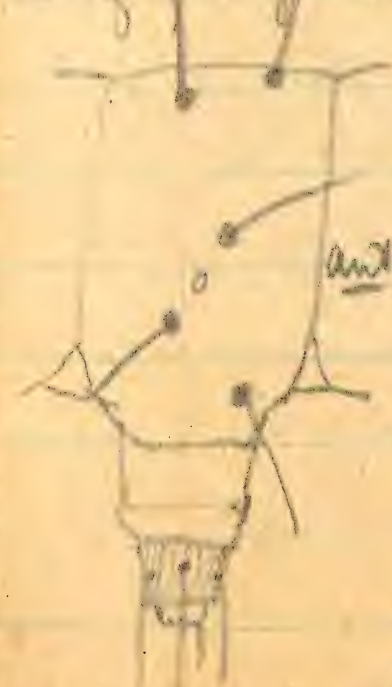
Hatched July 24 and ran to tip of teeth or end
of crotch. Pushed part way off the end. Hd. feet
and cth blackish. A d spot on 6 c12 and some
on 4, 6 c10 brownish red. Anal feet pale, 8 & 12 a
little enlarged d. Setae distinct, dark.

Calc. .45 .76 1.26 2.1 3.5 ratio .60
 { Found B16 1.3 2.1
 " B1448 .8 1.4 3.2
 .5 448 = 16

copied for
 Packard
 7-3-94

larva tridentate on chin on face
 midrib from which leaf again
 away! Hd higher than 2
 bilobed above anterior from 10-95
 brown lateral stripes to vertex
 ocelli black. w. 84 mm ± body
 cylindrical shiny green, a little
 dorsal red-brown dots on 5, a con-
 siderable bilobed process on 6,
 red brown, the ant. dots largest
 a single low broad one on 12
 bearing ① towards apex feet all
 red brown with s-v spots more
 reddish 2-5 and 11, abd. all red
 hump on 12 yellowish on the side
 setae all fine short dark red
 perceptibly glandular. C-8th and
 anal plate small, obscure dusky
 Setae i, ii, iii; iv big post, below; v and s-v,
 vi above base of leg, vii 4 setae on prople leg
 Aug 6, i on base of process, ii not on it

most June 23 reared 1.4 ± See B16 for
 head. S. process visible on 5, 6, 7 and
 12 highest on 6. all slight and
 tipped with brown. Larva on other
 segments; oblique lateral yellow
 line faint. red red brown with
 a faint yellowish s-s shading.
 Body not very opaque. tracheal line
 evident. As stage adv. all the
 humps appear slightly so body
 larva corresponds with description
 in B16, q. v. (vii = 3 setae on legless)
 Stage I on back of midrib near tip of
 leaf July 3, 1894. Setae normal, (vi absent)



Head shiny blackish notched
 a little at vertex, pale
 below, mouth narrow w. 5
 Body whitish with a green
 tinge, feet & tubercles black
 at end of stage a slight
 d. prominence on 6 and 12
 marked with red; a red
 stain at base of each foot
 and correspondingly on 5, 6 and 11. C-8th

Imago April 1895
Tined, Cat no 11483
Butalis Nasitarsis Zell
(C.H. Bernard) 449

juv & under ground
spring a slight
white cocoon between
humps of dirt

T-moth larva eating in the end leaf
buds of blackberry N.V. June 22, 1898

A no secondary hair ~~but trace~~. Setae
with flattened or winged furcate
ends, arising from cylindrical
prolonged bases. i+ii, their bases
fused partly; iii super stag post, single
iv+V, S-P. bases short; vi a little
post, setae; vii ant. on the base
which bears the slender leg. 3
setae in a Δ. Body shiny leaf
green, setae and tubercles white
head slightly testaceous ^{green above} ~~yellowish~~

Pupa slender tapering behind, fastened
by cremaster. A row of 5-6 tubercles
bearing 8 spines in fan shape con-
tained as a carinated ridge over
thorax. Thorax a little indented, cases
protruded into a point over each.
Two slight points above the eyes
green, whitish, cases more greenish

other purpose (normally light greenish)
brown, cases greenish or ^{maculose} ~~greenish~~
(see 429 A) May 13 1898

Several spines on thorax and some
soft fine hairs on abd. lat. 2-6 mm
B Secondary hairs (thorax) i+ii evidently
bearing about 10 setae with simple
ends. (many minute ones from above
over body, very short, tips slightly cleft)
iii with 6 setae, iv+V with 2 large
setae and several little ones
closely like those from above
2 rather prominent ones in line with
a little below iii with a slight
base recalling a wart, a single smaller
one behind. Below iv+V; vi below
on a distinct tubercle but among
many S-P shorter ones: vii 3 large
setae with many shorter ones with
slightly enlarged tips. Two other found
on Tachina, same; pale & whitish green
with faint red white bands, more
marked on blackberry, the
B 449 A does. Hd .7± lives on buds
Imago in June Cat nos 11009-12

8-12-94

450 = 20

Sent to Dr. Packard July 3 '94

Schizura nitida on Vitruvium spp. from
Mr. J. Doll, recd June 21 1894. Egg shells more
than hemispherical, flat on base, covered
with shallow, rounded hexagonal areas,
not distinctly defined and becoming
obscure and punctiform as micropyle
diam 8 um, height .6. Laid 3 in 4 together
on under side of leaf. Shell whitish.

Laid 4 on 2, 25d setae on enlarged bases
on 5 a bump bears i, single d bump: on
6-11 two bumps, i on each, getting smaller
post, on 2 a low single bump. Hd
higher than wide, the lobes distinct, pale
testaceous brown, body shiny red-brown finely
mottled with yellow, the color replaced by
clean yellow 5d on 3, 4, 6, 8 and 11 and
5v on 6, 8 and 9, feet dark. Setae have
rather large slightly conical brown
distension tubercle. i-v normal for
macro, (vi absent) some fine ones on
lower part of brown square leg plate.

.41 .63 .95 1.43 2.17 nat. 66

4 7 1.0 1.6
(.95)

Anal feet elevated setae pale slightly enlarged
at tip. Stage III 1.0 ± Hd small for body, tri-
lobed with a large tubercle at apex of each
lobe, rather flat before with several setae
pale brownish white streaked with brown
post, with a vertical brown band before
ocelli. to vertex of each lobe, connected by
an angular cross band above and again
faintly near vertex; clypeus greenish, rostrum
dark. Tubercles with enlarged bases
a slight bump on 5 & 12, bearing i near
apex. a pair of tubercles in place of ocelli.
Tubercles i-vi normal, several on leg plate
at first yellowish except the sides of 2 & 4 which are
Body shining leaf green. a purple brown
d band dotted with white extends 2-
anal feet, including a little on the center
of each seg. covering i on 5, but on 6 i is
light yellow; the brown covers the whole
of 7 even the foot and sternum. the
post half of 6 and a 2 seg patch on 5.
i & 8 yellow; band covers ii on 9 & 10 and
sterni foot on 10, moving up and on

also feet into 11; cover i on 11 and 12
very narrow on 13 and hence with
small feet. A faint white red band,
stained with yellow, most distinct
8-9 and forming a somewhat oblique
yellowish mark on 11 recalling V mark
green ground replaced posteriorly 5-8
by whitish streakings. The feet pale
setae pale with glandular tips
Stage I June 23 Hd. 7 Bilobed, with
tubercle at apex of each lobe. Red brown
with a rounded pale green patch on
each side of clypeus along, one on
side of each lobe and clypeus same
color. ocelli dark, a few setae.
Red brown dorsal line with markings
of same color finely yellow dotted
along the lateral area covering the
whole of segs 5, 7, 10 and 12; rest of
the body pale yellowish, especially
on 8. 2 central abd feet. The
feet pale; i with enlarged base

intended i on 8 and 12 make
slight but distinct punctate
punctures which disappear in Stage V
forming slight prominences on 2, 5
and 12. Anal feet elevated. Brown
setae dusky with glandular tips
normal iv 5 spot, v and vi post 8-9
on 6 on leg plate. Purses of setae curved
June 24 (Hd. 95) rounded 1.6 broad and
as before, but a brown line running up
from venter is all that is left of the
brown on back of lobes and the band
curving the ventral line above is
broken. Body as before, in color
the setae stiff, distinct (no gland
alone. The green of the side is
considerably broken by whitish
streaks, i on 6 and ii on 8 yellow.
As stage advances the d. band fades
out posteriorly, the red white line
broken on 11 becomes more distinct
and its post part forms a distinct V.
mark on 11, very absent post to the
June 27 Hd small, glad before
rounded, higher than wide, white

and a large one

with faint yellowish tinge; from each side
of base of Δ a broad runs to vertex of each
lobe cut by a small spot of ground color ^{each side}
apparent apex of Δ and marking bordering Δ
above, broad purple brown mottled with
round dot of the ground color. a small
faint band behind ocelli. a very
slight prominence on 5 and 12, low, scarcely
even a bump, otherwise smooth, tubercles
absent, setae small dark, only vi and
leg ones with tubercles; anal feet elevated
Body green, clean on sides of 2-4 with
a d. purple brown band mottled
with white which tapers and ends at
5. a white sd shade 5-13, diffuse
downwards, broken on 11, the first part
constricted forward on 11 to 10 and becoming
yellow forms a V-mark supplemented by a
few dots on ^{9th} 11. a distinct yellow patch
surrounds i on 6-8 with a yellow dot
dorsal shading, the spot i on 8 separated
by a brown Y shaped mark (In some cut
of 5-8 more or less covered with dark
brown mottled with whitish) and the
brown usually persists in a band from
apex of 5 back to abd feet. Bases
of feet around vi. waxy white the area
bordered by a rather irregular brown
mark. Anal pl. 6 feet dark. Spiracles
pale brown. The feet tinged with reddish
(and cut by oblique lines of the ground color)

